Contents

Volume 78 Number 1 1983

G. J. Doucette, G. A. Fryxell
Thalassiosira antarctica: vegetative and resting stage chemical composition of an ice-related marine diatom 1

T. Hartmann, E. Löhr
Decarboxylation of environmental L-leucine by marine red algae 7

S. Tagger, A. Bianchi, M. Julliard, J. Le Petit, B. Roux
Effect of microbial seeding of crude oil in seawater in a model system 13

C. B. Cook, A. H. Knap
Effects of crude oil and chemical dispersant on photosynthesis in the brain coral *Diploria strigosa* 21

D. Schlichter, A. Svoboda, B. P. Kremer
Functional autotrophy of *Heteroxenia fuscescens* (Anthozoa: Alcyonaria): carbon assimilation and translocation of photosynthates from symbionts to host 29

D. Trotter, J. M. Webster
Distribution and abundance of marine nematodes on the kelp *Macrocystis integrifolia* 39

T. J. Cowles, J. F. Remillard
Effects of exposure to sublethal concentrations of crude oil on the copepod *Centropages hamatus.* I. Feeding and egg production 45

T. J. Cowles
Effects of exposure to sublethal concentrations of crude oil on the copepod *Centropages hamatus.* II. Activity patterns 53

C. Hudon
Selection of unicellular algae by the littoral amphipods *Gammarus oceanicus* and *Calliopius laeviusculus* (Crustacea) 59

C. O. Wirsen, H. W. Jannasch
In-situ studies on deep-sea amphipods and their intestinal microflora 69

I. C. Potter, P. J. Chrystal, N. R. Loneragan
The biology of the blue manna crab *Portunus pelagicus* in an Australian estuary 75

L. S. Howard, B. E. Brown
Natural variations in tissue concentration of copper, zinc and iron in the polychaete *Nereis diversicolor* 87

Ch. Guisado, J. C. Castilla
Aspects of the ecology and growth of an intertidal juvenile population of *Concholepas concholepas* (Mollusca: Gastropoda: Muricidae) at Las Cruces, Chile 99

E. Macpherson
Feeding pattern of the kingklip (*Genypterus capensis*) and its effect on the hake (*Merluccius capensis*) resource off the coast of Namibia 105

Volume 78 Number 2 1984

K. H. Koltes
Temporal patterns in three-dimensional structure and activity of schools of the Atlantic silverside *Menidia menidia* 113

G. J. Eckert
Annual and spatial variation in recruitment of labroid fishes among seven reefs in the Capricorn/Bunker Group, Great Barrier Reef 123

J. F. Siebenaller, P. H. Yancey
Protein composition of white skeletal muscle from mesopelagic fishes having different water and protein contents 129

C. I. Cosper, L. C. Vining, R. G. Ackman
Sources of cyclopropanoid fatty acids in the mummichog *Fundulus heteroclitus* 139

S. Gilchrist
Evaluation of hermit crab shell indices 147

R. E. Scheibling, R. L. Stephenson
Mass mortality of *Strongylocentrotus droebachiensis* (Echinodermata: Echinoidea) off Nova Scotia, Canada 153

W. J. Kimmerer
Spatial and temporal variability in egg production rates of the calanoid copepod *Acrocalanus inermis* 165

W. L. Stockton
The biology and ecology of the epifaunal scallop *Adamussium colbecki* on the west side of McMurdo Sound, Antarctica 171

continued on next page

D. L. Meyer, C. A. LaHaye, N. D. Holland, A. C. Arneson, J. R. Strickler
Time-lapse cinematography of feather stars (Echinodermata: Crinoidea) on the Great Barrier Reef, Australia: demonstrations of posture changes, locomotion, spawning and possible predation by fish 179

S. Demers, J.-C. Therriault, C. Descolas-Gros
Biomasse et composition spécifique de la microflore des glaces saisonnières: influences de la lumière et de la vitesse de congélation. [Biomass and specific composition of the seasonal sea-ice microflora: influences of light and rate of freezing] 185

G. S. Kleppel, R. E. Pieper
Phytoplankton pigments in the gut contents of planktonic copepods from coastal waters off southern California 193

M. Diouris, J. Y. Floc'h
Long-distance transport of ^{14}C-labelled assimilates in the Fucales: directionality, pathway and velocity 199

O. R. Anderson, N. R. Swanberg, P. Bennett
An estimate of predation rate and relative preference for algal versus crustacean prey by a spongiose skeletal radiolarian 205

K. Schmitz
A cell system for symplastic transport of photoassimilate between meristoderm and sieve elements in *Alaria tenuifolia* 209

C. E. Mills, R. L. Miller
Ingestion of a medusa (*Aegina citrea*) by the nematocyst-containing ctenophore *Haeckelia rubra* (formerly *Euchlora rubra*): phylogenetic implications 215

J. A. Pechenik, S. C. Chang, A. Lord
Encapsulated development of the marine prosobranch gastropod *Nucella lapillus* 223

Volume 78 Number 3 1984

J. J. Torres
Relationship of oxygen consumption to swimming speed in *Euphausia pacifica*. II. Drag, efficiency and a comparison with other swimming organisms 231

R. A. Kinzie, III, P. L. Jokiel, R. York
Effects of light of altered spectral composition on coral zooxanthellae associations and on zooxanthellae *in vitro* 239

M. G. Haygood, B. M. Tebo, K. H. Nealson
Luminous bacteria of a monocentrid fish (*Monocentris japonicus*) and two anomalopid fishes (*Photoblepharon palpebratus* and *Kryptophanaron alfredi*): population sizes and growth within the light organs, and rates of release into the seawater 249

R. J. Henderson, J. R. Sargent, C. C. E. Hopkins
Changes in the content and fatty acid composition of lipid in an isolated population of the capelin *Mallotus villosus* during sexual maturation and spawning 255

C. A. Miller, M. R. Landry
Ingestion-independent rates of ammonium excretion by the copepod *Calanus pacificus* 265

M. de Nicola Giudici
Defence mechanism of *Bonellia viridis* 271

A. L. Suer
Growth and spawning of *Urechis caupo* (Echiura) in Bodega Harbor, California 275

M. A. Tyler
Dye tracing of a subsurface chlorophyll maximum of a red-tide dinoflagellate to surface frontal regions 285

T. A. Dean, S. C. Schroeter, J. D. Dixon
Effects of grazing by two species of sea urchins (*Strongylocentrotus franciscanus* and *Lytechinus anamesus*) on recruitment and survival of two species of kelp (*Macrocystis pyrifera* and *Pterygophora californica*) 301

J. M. Davies, R. Payne
Supply of organic matter to the sediment in the northern North Sea during a spring phytoplankton bloom 315

C. J. Dawes, C.-P. Chen, J. Jewett-Smith, A. Marsh, S. A. Watts
Effect of phosphate and ammonium levels on photosynthetic and respiratory responses of the red alga *Gracilaria verrucosa* 325

H. P. Jeffries, M. S. Berman, A. D. Poularikas, C. Katsinis, I. Melas, K. Sherman, L. Bivins
Automated sizing, counting and identification of zooplankton by pattern recognition 329

I. R. Poiner, R. Kennedy
Complex patterns of change in the macrobenthos of a large sandbank following dredging. I. Community analysis 335

Indexed in Current Contents